

Position Title: **Principal Research Scientist**

Organizational Unit: Center for Imaging Science, College of Science

FLSA Status: Exempt

**BASIC FUNCTION:**

In support of CIS missions, a Principal Research Scientist is responsible for providing a high level of scientific research expertise for CIS activities associated with new program initiatives, new and on-going development activities and applied and fundamental scientific research. The Principal Research Scientist conducts high quality scientific research, prepares final reports and journal articles disseminating the results of that research, and develops external funding for research projects through sponsor liaison, development, and proposal preparation activities. A principal research scientist provides planning, and scientific direction for interdisciplinary research projects and research projects in his/her specific expertise area, and provides mentorship to more junior scientists, including students.

**MINIMUM QUALIFICATIONS\***

\*Substitution of relevant education or experience for stated qualifications may be considered.

*Knowledge, Skills, and Abilities:*

- Expert technical knowledge of major scientific area.
- Expert ability to conduct scientific research.
- Fluent knowledge of programmatic aspects of research (cost, resources, and schedule).
- Excellent verbal and written communication skills.
- Expert mentoring and/or teaching ability.
- Proven ability to independently define and conduct high level research
- Proven ability to disseminate research results through publication in reports and refereed journal articles
- Proven ability to win grants and contracts.
- Proven ability to work in a team and to establish and maintain effective professional working relationships, including with peers across disciplines.
- Acknowledged scientific leadership.

*Education*

- Advanced University Degree (PhD preferred) in Engineering, Computer Science, Physics, Math, Engineering, technical management or another technically related and appropriate field

*Experience*

- Minimum of 10 years experience in scientific research development.

*Duties and Responsibilities\**

\* See annual performance goals and objectives for complete list

A **Principal Scientist** will propose, carry out and document a high level scientific research program. The Principal Scientist will:

- Provide high level scientific expertise for new and ongoing activities within CIS.
- Interface with manufactures or vendors as well as university, government and industrial customers in the development and definition of research projects.
- Develop cost and schedule project plans for scientific research projects.
- Carry out a high level scientific research program.
- Participate in large interdisciplinary research programs.

- Document the results of scientific research through reports, presentations at meetings, and through publication in proceedings and refereed journal articles.
- Lead and/or support proposal generation and other new business efforts.
- Document new early results and new initiative concepts in internal reports, white papers, and proposals.
- Organize and lead CIS wide senior science and engineering teams, to perform in house reviews of proposals and concepts.
- Guide and mentor more junior scientists, including students, to promote skill growth.
- Participate as a member in appropriate professional society or organization.

Division Approval:

HR Approval:

Effective Date:

Revised Date(s):

Definitions:

A **basic** level of expertise can be accomplished through the successful completion of a course in a specific area or a curriculum in a general field. This level would be assigned to someone who understands the basic topics, principles or practices within an area but has not practiced these principles in a non-class environment.

A **working** level of expertise can be accomplished through the successful completion of a curriculum in an area. This level would be assigned to someone who understands complex topics, principles or practices within an area but has not practiced these principles in a non-class environment.

A **fluent** level of expertise would be assigned to someone who understands the complex topics, principles or practices of an area and has demonstrated their competency through the completion of a small number (e.g. 3-4) of medium-sized to large-sized projects in a research environment..

An **expert** level would be assigned to someone who has a thorough understanding of topics, principles or practices in an area and has demonstrated their competency through the completion of a number (e.g. 8-10) of medium-sized to large-sized project in a research environment..

A **demonstrated** skill indicates that a person has successfully completed this skill but there is some risk that the same result will not occur for the next opportunity.

A **proven** skill indicates that a person has successfully completed this skill often or with sufficient quality that it is expected that the same successful result will occur for the next opportunity.

Center Approval:

HR Approval:

Effective Date:

Revised Date(s):